

# Southern California Offshore Range (SCORE) Development History (1981-2007)



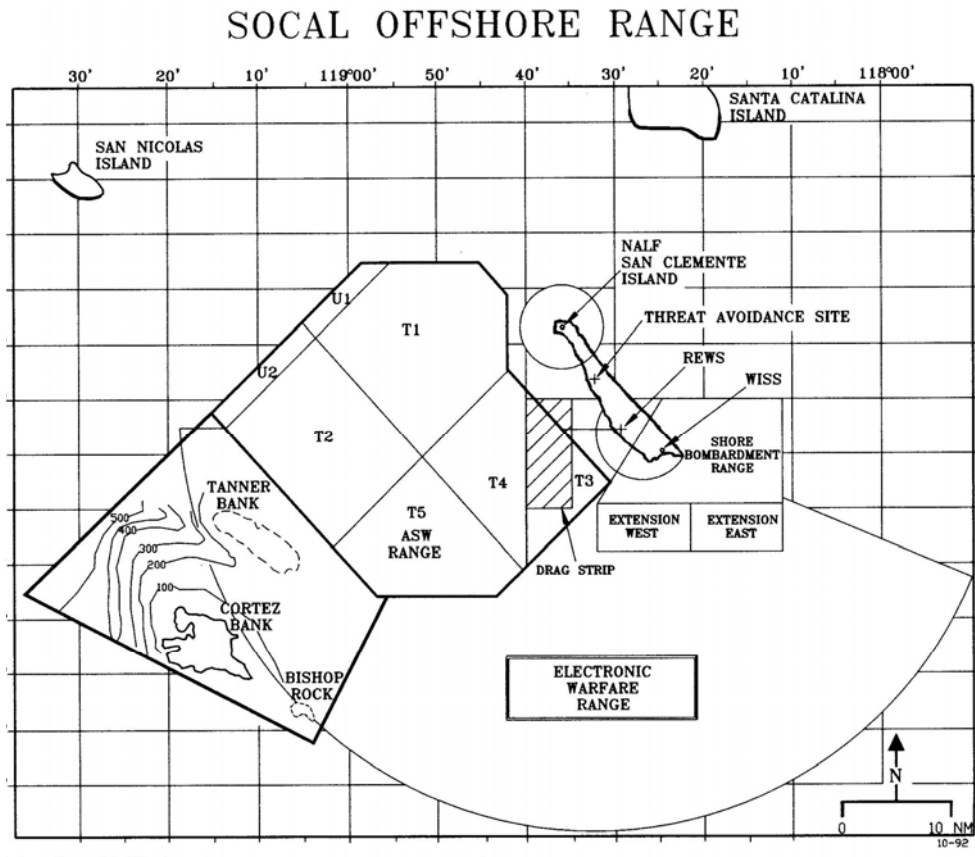
## Southern California Offshore Range (SCORE) Development History (1981-2007)

The San Clemente Island Range Complex (SCIRC) is the cornerstone of the tactical training ranges for the Southern California Operations Area (SOCAL). SOCAL supports the largest concentration of naval forces in the world. The SCIRC land, air, and sea ranges provide the U.S. Navy, U.S. Marine Corps, and other military services, space and facilities which they use to conduct readiness training, and test and evaluation activities.

Control over all these activities for operations, scheduling, and maintenance is the responsibility of the Southern California Offshore Range (SCORE), who has single operational authority over the San Clemente Island ranges. SCORE presently manages and operates twenty seven (27) training range sites on the island, and five (5) on the San Diego mainland. These range sites are in support of the following training missions and communications utilities:

Amphibious Warfare (AMW), Air Warfare (AW), Command & Control Warfare (C2W/EW), Ground Truth Data (GTD), Mine Interdiction Warfare (MIW), Navy Special Warfare (NSW), Research, Development & Testing (RDT), Strike Warfare (STW), Surface Warfare (SUW), Under Sea Warfare (USW), and inter-site communications.

This diagram shows the SCI Range Complex Operating Areas on and around San Clemente Island:



The following is a chronological depiction of the SCORE development:

**FY81** - Planning for a military anti-submarine warfare training range at San Clemente Island, was initiated jointly with COMASWINGPAC, AIRPAC, the Naval Ocean Systems Center (NOSC), San Diego., Naval Undersea Center (NUSC), Newport, RI., Naval Undersea Weapons Station (NUWES), San Diego, and participating.

**FY82** – The Naval Ocean Systems Center (NOSC) designed and constructed the three-shelter Cable Termination Van (CTV) complex, and the Emergency Power Van (EPV).

The primary CTV electronics van was then shipped to the Naval Undersea Center (NUSC), in Newport, RI, for the installation of Undersea Cable Termination electronics equipment.

The Range Electronic Warfare Simulator (REWS) site and EW systems design were prepared by the Naval Laboratory at China Lake, CA., and the San Clemente Island site construction was initiated.

Kentron International at this time was the San Clemente Island RDT&E ranges support contractor for the Naval Ocean Systems Center.

**FY83** – Upon return receipt of the primary electronics van back to San Diego, NOSC and NUSC Newport, teamed to install the three (3) CTV shelters, and the underwater acoustic array at West Cove on San Clemente Island. The Undersea Warfare range (USW) was operationally tested and declared operational.



**Aerial View of CTV Complex (1983)**



**End View of CTV Complex**

Construction was started on the Range Operations Center (Bldg. 1479) at NAS, North Island. This facility would provide 9,020 sq. ft. of area to support sixty-eight (68) work stations and offices, an Auditorium, three (3)-Conference Rooms, a Data Production Center, a Security & Reception area, sanitary facilities, and the necessary utilities support areas. This facility would provide for the current level of operational support, but planning for future expansion was under consideration.

**FY84** – The initial REWS site construction was completed., consisting of the upper level Control and Maintenance Shelter (CAMS), the Power Distribution System (PDS), and the lower level Noise Jammer Simulator (NJS) compound. The PDS generators were mounted on a large uncovered concrete slab.





**REWS Site Upon Completion in 1984**

**FY85** – The Anti-Submarine Warfare Range (SOAR) was available for limited operations on 1 August, then became fully operational on 30 August 1985.

The Southern California ASW Range (SOAR) now provided an instrumented three dimensional, (air, surface and subsurface) tracking range for training USW crews and evaluating the performance of USW platforms and equipment. Principal range users were west coast air, surface and submarine commands. Located west of San Clemente Island, 68 miles off the Southern California coast, SOAR now provide 670 square miles of area instrumented for USW/ASW training.

Construction of the SOAR Range Operation Center (ROC), Building 1479 at the Naval Air Station, North Island (NASNI) was completed. It was commissioned and manned by civil service and sub-contractor personnel. Island operations and technical support was provided by the Kentron International contractor personnel

During the first quarter of FY86, a total of 27 exercises were conducted on SOAR, including 18 air, 3 submarine, 3 surface ship and 3 coordinated ASW exercises. During these ASW exercises, submarines participated 20 times, surface ships participated on 24 occasions, helicopters on 65 occasions, and fixed wing aircraft 41 times.

**FY86** – During FY86, a total of 143 ASW training exercises were conducted on SOAR. This total included 83 air, 21 submarine, 20 surface ship, and 19 coordinated ASW exercises. SOAR provided approximately 800 hours of ASW training during this period.

**FY87** – COMNAVAIRPAC consolidated the SOCAL Offshore Training Ranges by creating SCORE from multiple incompatible range development programs. SCORE was commissioned under the command of the Fleet Area Control and Surveillance Facility (FACFAC) at NAS, North Island.

During FY87, a total of 207 ASW training exercises were conducted on SCORE, comprised of 128 air, 34 submarine, 37 surface ship, and 8 coordinated exercises. A total of 260 Mk 46 exercise torpedoes (EXTORPS) and 109 Mk 48 extorps were utilized during this period.

Several significant “firsts” were achieved. (1) A Rocket Thrown Torpedo (RTT) launched by the USS Hewitt (DD-966) on July 2, was tracked using a MK 72-3 pinger.

(2) USS Hewitt was the first ship to be debriefed at the SOAR Range Operations Center (ROC). (3) SOAR was utilized by two S-3B aircraft from VX-1 on 11 September as part of the S-3B OPEVAL, and (4) during COMPTUEX 86-5, 19 MK 46 torpedoes were fired within a two and one half day period. This required the first five-hour MK 27 target runs.

**FY88** – On 1 January, the EW Range became operational using Noise Jammer Simulation (NJS) and a temporary Radar Signal Simulator (RSS-19) using an I-band transmitter at the REWS site.. During the remainder of FY88, these EW services were provided for a total of 76 days, training 143 surface ships and 16 aircraft.

During FY88, a total of 309 ASW training exercises were conducted on SCORE, comprised of 166 air, 68 submarine, 59 surface ship, and 16 coordinated exercises.

Range support facility construction projects were performed in support of ranges development. These included: the Power Distribution Building (REWS), the Maintenance & Storage Buildings 1 & 2 (REWS), Storage Van & Equipment Pads (REWS), Road Repair (REWS), a Potable Water Tank (REWS), and a Secondary Compound Security Fence (REWS). Also the Sonobuoy Tracking System (STS) “South Site” road was repaired, and a grey water leach field was installed at the CTV site. These “self-help” projects were performed by a 409<sup>th</sup> CBU military construction unit out of Long Beach, CA..



**Power Distribution System Building (PDS) - 1988**

Additional “self-help” projects utilizing the 7<sup>th</sup> Marines from Camp Pendleton provided a number of Shore Bombardment Area (SHOBA) facility additions and impact area access upgrades. These included: four (4) Target Area Surveillance System (TASS) Instrumentation Shelters, the Observation Post 1 (OP-1) Personnel Support Building (Palace) entrance patio, a safety bullhorn pad near the Pyramid Cove beach of Fire Support Area 1 (FSA-1), and range renovation of targets and roads in SHOBA.



**Target Area Surveillance System (TASS) Shelter-1988**

Also during this year, the Corps of Engineers from Walla Walla, WA., provided surveys of the CTV and REWS sites. And in September, DynCorp was awarded the range support contract at NOSC.

**FY89** – During FY89, a total of 321 ASW training exercises were conducted on SCORE, comprised of 145 air, 71 submarine, 82 surface ship, and 23 coordinated exercises. Coordinated exercises consisted of parts of READIEX and COMPTUEX, three Naval Reserve training exercises and five CoordOps. During these exercises, submarines participated on 103 occasions, surface ships on 182 occasions, helicopters on 448 occasions, and fixed wing aircraft on 178 occasions. A total of 276 Mk.46 Exercise Torpedoes (EXTORPS) and 215 Mk.48 extorps were utilized during FY 89.

During FY89, EW services were utilized on a total of 123 days. Two hundred thirty nine (239) surface ships and 41 aircraft participated in these training events.

The torpedo retrieval site at NALF was augmented with the installation of the exercise torpedo retrieval soft & hard pads in a self-help project utilizing the 14<sup>th</sup> Combat Engineering Battalion personnel from Fort Ord, CA. This unit also installed concrete foundation footing extensions for the Cable Termination Van (CTV)

**FY90** – During FY90, a total of 367 ASW training exercises were conducted on SCORE, comprised of 202 air, 58 submarine, and 107 surface ship exercises. During these exercises, submarines participated on 86 occasions, surface ships on 141, helicopters on 582, and fixed wing aircraft on 222 occasions.

During FY90, EW services were utilized on a total of 123 days, with 223 surface ships, and 41 aircraft participating.

The Torpedo Facility (TORPFAC) development was initiated by the installation of the slabs and wing-walls for the Torpedo Storage building, the Weapons Truck Garage, and the slab for the Maintenance & Storage building. An additional torpedo retrieval Soft Pad was installed at this site. A Torpedo Effluent Storage Shelter was also completed.

The “Tombstone” EW site was also initiated with development of 1.25 miles of road, site fill and compaction, and the installation of equipment van pads, a fuel tank and fuel containment slab/enclosure, and the operations, generator, and motor generator buildings foundations and slabs.

The “Little Rock” EW site construction was initiated with the site preparation and installation of the operations building wing walls and slab. This site was established in an environmentally sensitive area, so the perimeter of the site was established laying down a perimeter barrier of telephone poles. All these projects again were self-help based, utilizing a military construction unit. In this case the 14<sup>th</sup> Combat Engineering Battalion from Fort Ord, CA.

The EW services now consisted of four sites: the Range Electronic Warfare Simulator (REWS), the Threat Avoidance Simulator (TAS) at Station “Little Rock” and “Tombstone”, and the Outboard Stimulator (OBS) located at the SOARFAC site.



**“Tombstone” EW Site - (1990)**



**“Little Rock” Threat Avoidance Site – (1990)**

**FY91** – Due to the deployment of military construction units to the gulf region during “Desert Storm”, range support facility construction projects for this year were cancelled.

FY91 was a productive operating period for the ASW range, in spite of MK-27 target run restrictions and the SOAR Phase 2 installation work. A total of 364 ASW training exercises were conducted, comprises of 216 air, 46 submarine, 81 surface ship and 21 coordinated exercises. A total of 615 exercise weapons were expended.

The EW range was still under development. However, the range was scheduled for approximately 681 hours or an average of 57 hours per month. The Threat Radar Simulator (TRS) subsystem was installed and was undergoing operational testing. A highly successful test event had generated a great deal of interest in the Air ASW community, particularly in the LAMPS squadrons..

**FY92** – During the FY92 period, a total of 406 ASW training exercises were conducted on SCORE, comprised of 225 air, 40 submarine, 69 surface ship, and 72 coordinated exercises and tests. During these exercises, submarines participated on 126 occasions, surface ships on 186 occasions, helicopters on 691 occasions, and fixed wing aircraft on 251 occasions. A total of 143 Mk. 46 Exercise Torpedoes (EXTORPS), 113 Mk 48 extorps and 2 Mk 50 extorps were utilized during this period. A total of 611 exercise weapons were expended.

SCORE EW range services, during this period, were utilized on a total on 120 days. Fleet participation in training events included 218 surface ships, 1 submarine, and 90 aircraft

This year saw a significant number of range site facilities development. These self-help projects again enlisted the help of military construction units, in this case the 864<sup>th</sup> Engineers from the Presidio in San Francisco, and the 555<sup>th</sup> Engineers from Fort



Lewis, WA. These projects included several of the existing range sites as follows: an HF Antenna, Coupler Pad, & Safety Fence (SOARFAC), Rain Runoff & Diversion Trenches (SOARFAC), concrete footings and slab for a Storage Van (SOARFAC), the Torpedo Storage Building completion (TORPFAC), a Maintenance & Storage Building (TORPFAC), a Microwave Repeater Mast (Little Rock/Tombstone), 1.7 miles of road repair (REWS), a Maintenance & Storage Building #3 (REWS), a Generator Building (Tombstone), and a Motor Generator Building (Tombstone).

Tragically, while operating a belly-dump earth mover in support of the REWS road repair, PFC Anthony C. Dye of the 864<sup>th</sup> Engineers was killed when his unit went over the edge of the road at Mt. Thirst and tumbled down into the canyon below.

The DynCorp group at NOSC transferred and became the SCORE ranges support contractor for the Range Operations Center (ROC) at North Island in September.



**TORPFAC Storage Building  
(1992)**



**TORPFAC Torpedo Storage Bldg.  
(1992)**

**FY93** - A total of 387 ASW training exercises were conducted, comprised of 248 air, 45 submarine, 58 surface ships, and 36 coordinated exercises and tests. During these exercises, submarines participated on 115 occasions, surface ships on 131 occasions, helicopters on 550 occasions, and fixed wing aircraft on 202 occasions.

The SCORE EW range was scheduled for approximately 670 hours, or an average of 55 hours per month. Overall, the EW range was scheduled 53% of the hours available for use, and utilized 92% of the scheduled hours.

A major expansion of the Range Operations Center (Bldg. 1479) at North Island, added approximately 8,562 square feet to the west end of the existing building. This expansion provided space for twenty-eight (28) work stations and offices, an Integrated Data Center (1,185 sq. ft.), a Data Production Center (1,442 sq. ft.), a large workshop (906 sq. ft.), and a supply lay-down area (890 sq. ft.). Also added was an UPS room, a battery room, and a transformer enclosure. This expansion now provided the capability for using all the range subsystems concurrently.





### **Range Operations Center (Bldg. 1479), NAS, North Island**

**FY94** - In FY94, SCORE began routinely supporting unit level aerial mining exercises, resulting in a significant increase in Mine Interdiction Warfare (MIW) readiness.

Also, a significant increase between FY93 and this fiscal year in EW range available hours and scheduled hours was attributed to the transfer of range support from NCCOSC NRaD to FACS FAC. This training range consolidation not only resulted in increase utilization of EW services, but also in a significant O&M,N cost reduction.

**FY95** – During FY95, a total of 381 ASW training exercises were conducted on the ASW range, comprised of 283 air, 34 submarine, 53 surface ship and 11 coordinated exercises and tests. During these exercises, submarines participated on 88 occasions, surface ships on 84, helicopters on 408, and fixed wing aircraft participated in 259 exercises. A total of 734 various exercise weapons were expended.

The SCORE EW range was scheduled for an average of 183 hours per month and utilized 163 hours per month in FY95 which is almost double FY94, and triple FY93. The increase in EW scheduled hours is attributed to the transfer of range support to the Fleet Area Control and Surveillance Facility (FACS FAC), and the visibility of SCORE's EW capabilities.

**FY96** –.The new KINGFISHER tethered underwater mine avoidance training range became operational. This range is located on the western side of San Clemente Island.

This 15 inert shape shallow water field is positioned to allow maximum training at all levels, from unit to battle group, while providing feedback and tracking data in real time. This system, engineered and installed in a very short time frame and at low cost, is the first such system available on the west coast to exercise surface ships prior to their deployment.

The Mine Readiness Certification Inspection (MRCI) Range was certified to host MRCI's using several San Clemente Island initial points (IP), computerized ballistics, and MK5 Mammal Recovery methods.

Range support facility self-help projects this year were accommodated by the Marine Wing Support Squadron (MWSS-174) from MCAS, Tustin, CA. These projects included completion of the Weapons Truck Garage, a Torpedo Soft Pad, Site Access Apron & Road, and buildings Ramps & Stoops, all at the TORPFAC site. In addition, Security Fencing & Gates were installed but not completed at the Tombstone EW site.

**FY97** – The Shore Bombardment Area (SHOBA) was transferred to SCORE from the Expeditionary Warfare Training Group, Pacific (EWTGPAC). This included the responsibility for all operations, scheduling, and maintenance functions. EWTGPAC continued to provide range safety and spotter training.

In FY97 SCORE supported SWATS, Sea Control Advanced Readiness Proficiency (SCARP) exercises. SCORE also supported Comtuex Fleetex, and Joint Task Fleet Exercise (JTFEX) battle group exercises with various levels of support. And the first MIR training exercise was conducted on the new KINGFISHER range.

**FY98** – CINCPACFLT approved the Adversary Island Concept for San Clemente Island, as the framework for prioritizing and integrating future tactical training improvements on the basis of Fleet requirements.

SCORE began supporting Surface-to-Air (SAMEX) and Air-to Air (AAMEX) MISSILEXs utilizing the Vega target control system with launches of 6 BQM-74E's and 5 missiles. VC-6 provided target prep and command and control of these targets.

Due to high reflectivity, Fire Support Area 1 was decertified for laser use.



**SCORE Commenced MissileXs Utilizing BQM-74E's (1998)**

**FY99** – The use of Roboski towed targets was initiated January 22 on the SUW training range. This initial exercise was a VS Bombex utilizing Roboski #1001 towing a trimaran target.

This fiscal year was an extremely productive operating period for SCORE. Overall, SCORE supported over 1000 exercises and 2000 Fleet participants, during nearly 3,500 utilized hours. On the USW range, over 600 Fleet participants deployed almost 300 exercise weapons. There were 52 Mine Warfare exercises conducted, including mine deployment and mine avoidance events. The EA/C2W Range supported a variety of training evolutions during which 548 operations involving nearly 600 Fleet participants were conducted. There were also 6 different types of missiles launched during 33 evolutions. Finally, SHOBA was utilized by over 700 Fleet participants encompassing more than 800 training hours.

**FY00** – CINCPACFLT announced the standup/startup of SCORE as San Clemente Island Op-Con, the SCI single operational authority. This leadership and coordination role encompasses a wide array of training on and around SCI, while improving safety and environmental compliance. SCI Op-Con commenced 1 March 2000.

SCORE increased SHOBA operations by supporting live fire and simulated ordnance exercises in the airspace and water areas in and adjacent to the SHOBA impact area. These operations included laser training, bomb exercises, and Supporting Arms Coordination Center (SACCEXs). SCORE increased the complexity and optempo of these exercises, while striving to insure high quality training capability in the littoral environment, including using mobile emitters and laser systems. The Weapons Impact Scoring System (WISS) and no-drop bomb scoring (NDBS) were utilized in these exercises, when available. The SHOBA range area was utilized by 428 fleet participants during 821 training hours, deploying 235,011 gunfire rounds, 36 missiles, and 3,385 various rockets, grenades, mines and bombs.

FY00 was an extremely productive operating year for SCORE. Overall, SCORE supported 1,041 exercises and 1,794 fleet participants, during 3,850 operating hours. Fleet participants deployed 339 torpedoes, 10 missiles, 15 rockets, 444 mines/bombs, and 100,450 gunfire rounds in the SAR (SoCal ASW Range) area. There were 39 exercises conducted in the MTR (Mine Training Range) areas in FY00 with 105 participants deploying 149 exercise weapons. The EWR (Electronics Warfare Range) area supported a variety of training evolutions during which 516 operations involving 463 fleet participants were conducted. Additionally, on 180 days, 300 periods of open broadcast cryptologic stimulator (CSS) services were provided. In total, EWR provided the Fleet with more than 2,000 hours of training. There were 20 exercises conducted in the MXR (Missile Exercise Range) area during FY00 involving 72 participants and 56 exercise weapons. The SBR (SHOBA Range) area was utilized by 428 Fleet participants during 821 training hours, deploying 235,011 gunfire rounds, 36 missiles, and 3,385 various rockets, grenades, mines and bombs. There were 10 different types of missiles launched on SCORE, some in SAR, some in SBR, and some in MXR.

**FY01** – The Loggerhead Shrike (LHS) is a bird that resides on San Clemente island, primarily inside the SHOBA boundaries. This bird is listed on the National Endangered Species list. During the LHS breeding season (typically Feb-Aug) the use of SHOBA for

training exercises is limited by a Biological Order (BO) issued by the Department of Fish and Wildlife Service. The Navy is required to close SHOBA to allow sufficient time for the protective wildlife personnel to monitor breeding and conduct predator control. During FY01, the Shore Bombardment Range was utilized by the fleet for 1,213.9 hours during 291 exercises. SBR was utilized by the Natural Resources Office personnel for 6,088.1 hours during 609 periods.

SCORE conducted in all warfare areas during FY01, a total of 1,698 training exercises, with 5,412 participants, encompassing 38,724 exercise hours.

SCORE's Hawk Radar and Mobile Emitters were now available to Fleet units in SBR. The Expeditionary Warfare Training Group-Pacific (EWTGPAC) continued to provide range safety and spotter training for FIREX's. Laser targeting training exercises were a valuable addition to Fleet readiness in SOCAL, and SCORE was now supporting IR augmentation to increase the target signatures to Forward Looking Infra-Red (FLIR) systems.

In August, due to the deterioration of the existing support craft moorings at Wilson Cove, a SCORE self-help team removed the WC-5 mooring buoy, and installed 2-new buoys (SC-1 @ 33 00.693 N/ 118 33.526 W & SC-2 @ 33 00.841 N/ 118 33.547 W).

**FY02** – As a result of the events of September 11, 2001, Fiscal Year 2002 saw a 35% increase in SCORE operations over FY 2001. The vast majority of that increase can be directly attributed to “Operation Enduring Freedom”.

SCORE's overall support to the Fleet encompassed 2,217 completed exercises, 5,336 Fleet participants and over 33,251 exercise hours.

During the period 27 August-13 September, Lockheed Martin personnel under contract from Fallon, NV, conducted a SHOBA range cleanup project. Upon completion of the cleanup, Fire Support Area 1 (FSA-1) was certified for laser use. (FSA-1 was decertified for laser use in 1998).

**FY03** – This period saw a 24% decrease in OPTEMPO due to force deployments for “Iraqi Freedom”. The largest participant drop was in fixed wing aircraft. Overall support for the Fleet encompassed 1,704 exercises, 4,177 Fleet participants, and over 18,709 exercise hours. The highest OPTEMPO was in C2W with 507 exercises, followed by SUW and USW. Naval Special Warfare (NSW) ground, rotary wing, submarine, and surface ship exercises totaled 210.

**FY04** – SCORE supported 2,051 exercises in FY04. The highest optempo was in NSW, followed by C2W and USW. SCORE support of NSW included both SWAT area and SHOBA exercises.

Beginning in December, SCORE became a Seaborne Target Operating Activity for the High Speed Mobile Surface Target (HSMST) RHIB target craft and Low Cost Tow Targets (LCTT's). These targets augmented the existing SCORE Roboski and catamaran/trimaran target systems for SUW training operations.

**FY05** – This fiscal year, SCORE's overall support to the Fleet encompassed 1,623 exercises, 5,629 fleet participant sorties, and over 21,616 exercise hours.



During FY05, SCORE supported a total of 2,271 fixed wing participants, 1,146 rotary wing participants, 522 ground combat units, 2,807 surface ships, and 140 submarine operations. The highest fixed wing OPTEMPO was in STW and C2W. The highest rotary wing OPTEMPO was in USW and SUW. The highest ground combat unit OPTEMPO was NSW and AMW. The highest surface ship OPTEMPO was in C2W and SUW. The highest submarine OPTEMPO was in USW.

The Cable Termination Shelter (CTS) was procured, and installed in May 2005, to replace the failing CTV. The CTS houses retained shore electronics from the existing underwater tracking range, the newly installed Digital Signal Processors (DSP), In-water Tracking Computers (ITC), and shore electronics for the newly installed bi-directional hydrophone array. This new shelter is constructed of six (6) light-weight concrete modules assembled to form a 60'8" x 36' building. This material was specified because of the site location . It is within 200 yards of the surf at West Cove. This structure provides an air-conditioned environment for twenty-five (25 ) or more electronics racks and housed equipment, electronics workshop area, storage, and office space for 3-4 site support personnel.



**New ASW Range Undersea Cables Termination Shelter**

Another SCORE self-help project resulted in the installation of four (4) more towed-target support craft mooring buoys in Wilson Cove, and a floating dock, brow, and jib crane at the Wilson Cove pier.



**Wilson Cove Pier Mooring Dock, Brow, & Jib Crane**

**FY06** – SCORE’s overall support to the Fleet encompassed 2,616 exercises, 6,041 fleet participant sorties, and over 25,891 exercise hours.

The SHOBA Gate Shelter (SGS) was installed to replace the old equipment shelter. This two unit shelter houses communications electronics, and an emergency generator. Construction is of light-weight concrete that is impervious to the salt-air environment of the island.



**SHOBA Gate Shelter (SGS) installed (2006)**

Also, a new “Adversary Village Boathouse” (Bldg. 60307) was constructed to replace the old condemned building at the VC-3 support site, and provide SCORE’s expanding watercraft storage and maintenance needs..



**New VC-3 Boat Building (Bldg. 60307)**

**FY07** - In February of 2007, three (3) new electronics shelters were installed at the old STS “North”, “South”, and the “Boulder” sites in support of Command & Control Warfare (C2W) and communications operations.



**Station “Boulder” Communications Shelter**



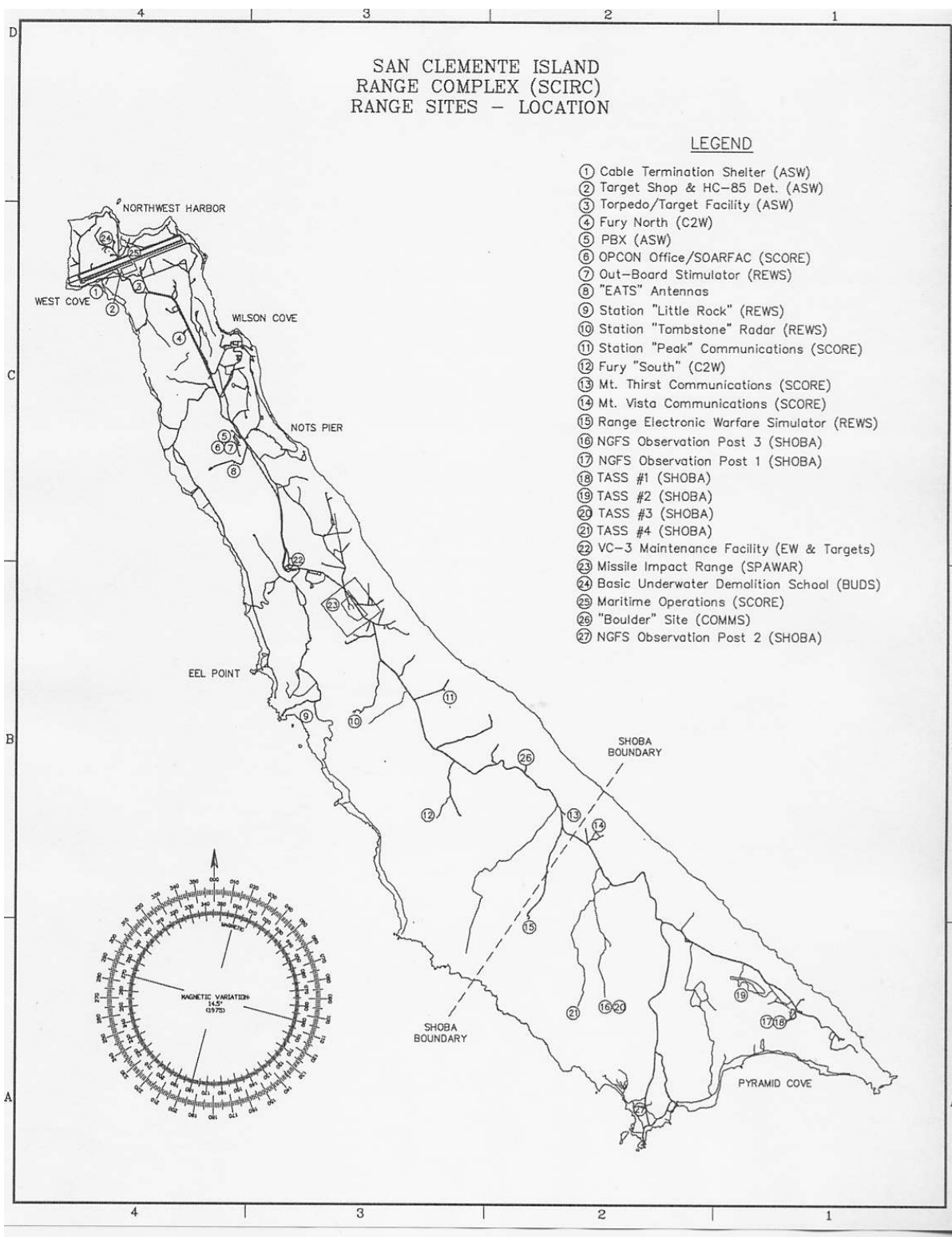


### **Range Electronic Warfare Simulator (REWS) Site**

This view of the REWS site shows the significant expansion of the EW missions, and support systems, over what was previously shown in FY84. On the lower level, the Hawk Missile launchers and radars (2001) are seen on the three (3) fingers extending from the end of the road. Next to the Noise Jammer Simulator (NJS) shelter (1988), can be seen the Threat Radar Simulator (TRS) facility (1991). On the upper level is the Power Distribution System (PDS) building (1988), the three (3) Maintenance and Storage buildings (1988), and the Photo-Voltaic (PV) Array (1996) that supplements the island main power grid at the site.

The following diagram identifies, and shows the locations, of the twenty seven (27) San Clemente Island SCORE range sites.





**Present San Clemente Island SCORE Training Range Sites**

The following listing provides building numbers and usage for facilities at San Clemente Island and the mainland assigned to SCORE and/or shared with other commands.

### SCORE Ranges Support Facilities

<u>SCORE Support Sites</u>	<u>Year Acquired</u>	<u>Type of Support</u>
<b>Cable Termination Vans (CTV)</b>	1983	U/W Cable termination
FACSFAC-NASNI Bldg 93	1983	Communications
PBX - Bldg. 60245	1985	Communications
<b>SOARFAC - Bldg. 60226</b>	1985	Office & EW Elex
<b>Station Peak - Bldg. 60411</b>	1985	Communications
Mt. Thirst - Bldg. 60502	1985	Communications
Station Vista - Bldg. 60505	1985	Microwave Communications
<b>VC-3 - Bldg. 60311</b>	1985	Targets & Electronics Maintenance
<b>VC-3 - Bldg. 60307</b>	1985	Watercraft Storage & Maintenance
<b>Target Shop - Bldg. 60008</b>	1985	USW Range Targets Turnaround
<b>ROC -NASNI Bldg. 1479</b>	1985	SCORE Range Operations Center
Pt. Loma FCTCPAC - Bldg. 24	1985	Communications Electronics
<b>REWS - Bldg. 60600</b>	1988	Site Generators/ Power Distribution
<b>REWS - Bldg. 60601</b>	1988	Maintenance & Storage
<b>REWS - Bldg. 60602</b>	1988	Maintenance & Storage
<b>Sta. "Tombstone" - Bldg. 60450</b>	1990	EW & TAS Operations
<b>Sta. "Little Rock" - Bldg. 60399</b>	1990	EW & TAS Operations
<b>TORPFAC - Bldg. 60018</b>	1990	Storage Building
<b>TORPFAC - Bldg. 60020</b>	1990	Torpedo Effluent Storage
<b>TORPFAC - Bldg. 60016</b>	1992	Torpedo Storage
<b>TORPFAC - Bldg. 60047</b>	1992	Maintenance & Storage
<b>REWS - Bldg. 60603</b>	1992	Maintenance & Storage
<b>Pod Shop - NASNI Bldg 825</b>	1994	Pods Operation & Maintenance
<b>Observation Post #1 - Bldg. 60901</b>	1997	Fire Support Area #1 - Observation
<b>Observation Post #2 - Bldg. 60806</b>	1997	Fire Support Area Security Elex
<b>Observation Post #3 - Bldg. 60801</b>	1997	Fire Support Area #2 - Observation
<b>SHOBA TASS Bldgs (4)</b>	1997	Target Area Surveillance System
Mt. Soledad -Carts-2 Bldg.	1997	Microwave Communications Elex
<b>SCORE - Bldg. 60224</b>	2000	SCORE OPCON
SCORE - Bldg. 60246	2001	Vehicles Maintenance & Storage
<b>SCORE - Bldg. 60225</b>	2003	Supply & Storage
<b>Cable Termination Shelter (CTS)</b>	2006	U/W Cable termination
<b>Shoba Gate Shelter</b>	2006	Missile Termination System Elex
<b>C2W Shelter "North"</b>	2007	Command & Control Electronics
<b>C2W Shelter "South"</b>	2007	Command & Control Electronics
<b>Sta. "Boulder" Shelter</b>	2007	Communications Electronics

**Bold Font** = Assigned to SCORE

**SCORE Ranges/NALF, SCI/NOSC  
Self-Help & Military Construction Unit Projects  
San Clemente Island**

The following listing presents chronologically the SCORE self-help facility development projects as assisted by military construction units, together with project year, range/island activity, and performing military or ranges activity.

<u>Year</u>	<u>Project</u>	<u>Range/Island Activity</u>	<u>Performing Activity</u>
1983	Cable Termination Vans/Site	ASW	NOSC
1988	CTV Grey Water Leach Field	ASW	409th CBU
1988	REWS Storage Van & Equipment Pads	EW	409th CBU
1988	REWS Power Distribution (PDS) Building	EW	409th CBU
1988	REWS Maintenance & Storage Building #1	EW	409th CBU
1988	REWS Maintenance & Storage Building #2	EW	409th CBU
1988	REWS Road Repair (1.7 Miles)	EW	409th CBU
1988	STS "South" Road Repair (1.3 Miles)	ASW	409th CBU
1988	REWS Secondary Compound Security Fence	EW	409th CBU
1988	REWS Potable Water Tank Erection	EW	409th CBU
1988	Boy Scout Sea Hut	@NALF	409th CBU
1988	"A" Frame Clubhouse Renovation	@NALF	409th CBU
1988	Tennis Courts Renovation	@NALF	409th CBU
1988	Corps of Engineers Sites Survey	ASW/EW	Army C of E
1988	Weapons Impact Scoring Syst. Bldgs (4)	SHOBA	7th Marines
1988	Bldg. 60906 (Palace) Entrance Patio	SHOBA	7th Marines
1988	Safety Bullhorn Pad (Pyramid Cove)	SHOBA	7th Marines
1988	Range Renovation - Targets & Roads	SHOBA	7th Marines
1989	Torpedo Retrieval Soft Pad	ASW	14th CEB
1989	Torpedo Retrieval Hard Pad	ASW	14th CEB
1989	CTV Footings Extension	ASW	14th CEB
1989	Remote Area Access Bridges	SHOBA	14th CEB
1989	Range Renovation - Targets & Roads	SHOBA	7th Marines
1990	TORPFAC Torpedo Storage Building-Pad & Walls	ASW	14th CEB
1990	TORPFAC Weapons Truck Garage-Pad & Walls	ASW	14th CEB
1990	TORPFAC Maint. & Storage Bldg.- Pad	ASW	14th CEB
1990	TORPFAC Effluent Storage Building	ASW	14th CEB
1990	TORPFAC Torpedo Retrieval Soft Pad	ASW	14th CEB
1990	SOARFAC Storage Building (Helicopter Pad)	ASW	14th CEB
1990	TOMBSTONE Site Access Road (1.25 Miles)	EW	14th CEB
1990	TOMBSTONE Site-Fill & Compact	EW	14th CEB
1990	TOMBSTONE Equipment Van Pads	EW	14th CEB

1990	LITTLE ROCK Site Prep. & Bldg. Pad & Walls	EW	14th CEB
1990	OEEET Projects Maintenance & Storage Bldg.	@SPAWAR	14th CEB
1990	Fire Station Site Excavation	@NALF	14th CEB
1991	Projects Deployment Cancelled ("Desert Storm")	All	14th CEB
1992	HF Antenna, Coupler Pad, & Safety Fence	ASW	864 <sup>th</sup> & 555 <sup>th</sup>
1992	SOARFAC Run-Off Diversion Trenches	ASW	864 <sup>th</sup> & 555 <sup>th</sup>
1992	TORPFAC Torpedo Storage Building (Complete)	ASW	864 <sup>th</sup> & 555 <sup>th</sup>
1992	TORPFAC Maint. & Storage Building (Complete)	ASW	864 <sup>th</sup> & 555 <sup>th</sup>
1992	LITTLE ROCK-TOMBSTONE Repeater Mast	EW	864 <sup>th</sup> & 555 <sup>th</sup>
1992	REWS Road Repair (1.7 Miles)	EW	864 <sup>th</sup> & 555 <sup>th</sup>
1992	REWS Maintenance & Storage Building	EW	864 <sup>th</sup> & 555 <sup>th</sup>
1992	TOMBSTONE Generator Building	EW	864 <sup>th</sup> & 555 <sup>th</sup>
1992	TOMBSTONE M-G Building	EW	864 <sup>th</sup> & 555 <sup>th</sup>
1992	Temporary Berthing Buildings (2)	@NALF	864 <sup>th</sup> & 555 <sup>th</sup>
1992	REWS Maintenance & Storage Building #4	EW	409 <sup>th</sup> CBU
1992	Temporary Berthing Buildings (2)- Carpentry	@NALF	409 <sup>th</sup> CBU
1996	TORPFAC Weapons Truck Garage (Uncompleted)	ASW	MWSS-374
1996	TORPFAC Soft Pad & Bldgs Access Apron/Road	ASW	MWSS-374
1996	TORPFAC Buildings Ramps & Stoops	ASW	MWSS-374
1996	Tombstone Security Fence & Gates	EW	MWSS-374
2001	Wilson Cove Mooring Buoy Installations (2)	SUW	SCORE
2005	Cable Termination Shelter (CTS)	ASW	SCORE
2005	TORPFAC Storage Building	ASW	SCORE
2005	Wilson Cove Mooring Buoy Installations (4)	SUW	SCORE
2005	Wilson Cove Floating Dock , Brow & Jib Crane	SUW	SCORE
2006	SHOBA Gate Shelter (SGS)	EW	SCORE
2006	VC-3 Boat House	SUW	SCORE
2007	"Boulder" Site Electronics Shelter	EW	SCORE
2007	C2W "North" Site Electronics Shelter	EW	SCORE
2007	C2W "South" Site Electronics Shelter	EW	SCORE

NOSC: Naval Ocean Systems Center, San Diego, CA  
 409<sup>th</sup> CBU: U.S. Navy 409<sup>th</sup> Construction Battalion Unit, Long Beach CA  
 7<sup>th</sup> Marines: U.S. Marine Corps 7<sup>th</sup> Engineers, Camp Pendleton, CA.  
 14<sup>th</sup> CEB: U.S. Army 14<sup>th</sup> Combat Engineering Battalion, Fort Ord, CA  
 864<sup>th</sup>: U.S. Army 864<sup>th</sup> Engineers, The Presidio, San Francisco, CA  
 555<sup>th</sup>: U.S. Army 555<sup>th</sup> Engineers, Fort Lewis, WA  
 MWSS-374: U.S. Marine Corps-Marine Wing Support Squadron, MCAS, Tustin, CA  
 @ - Materials Funded By Activity.



## **THE SCORE MISSION**

The mission of SCORE is to improve the combat readiness of Pacific Fleet air, surface, and submarine units in all warfare areas providing instrumented operating areas and associated facilities to support training exercises. Ancillary missions include support for evaluations of equipment and/or tactical concepts developed to support Navy programs. Since its inception in 1985, the use of SCORE can be directly related to the U.S. Navy's success in world conflicts, and the high state of readiness that the Department of Defense enjoys today. The following provides a description of the various training ranges and their missions:

### **USW RANGE (SOAR)**

The USW range provides an instrumented three dimensional, (air, surface and subsurface) tracking range for training USW crews and evaluating the performance of USW platforms and equipment. Principal range users are west coast air, surface and submarine commands. Located west of San Clemente Island, 68 miles of the Southern California coast, SOAR provides 670 square miles of area instrumented for USW/ASW training.

### **KINGFISHER TRAINING RANGE (KTR)**

The Kingfisher training range is a simulated minefield. Originally 15 shapes were installed. Several additional bottom shapes were laid in support of a T&E exercise just inside the KTR boundary and provide a second type of Kingfisher shape for Fleet users. KTR provides mine shape avoidance training at low cost and high fidelity utilizing tethered underwater mine shapes. KTR is located on the western side of San Clemente Island. The shallow water minefield is positioned to allow maximum training for all levels, from basic to advanced, while providing feedback and tracking data in real time. This system is the only such system available on the west coast to train surface ships in shallow water mine avoidance, prior to deployment overseas.

### **C2W RANGE (EWR)**

C2W services are currently provided from various fixed and mobile sites on San Clemente Island. The Range Electronic Warfare Simulator (REWS) site consists of a HAWK Missile System (MIM-23), a Noise Jamming Simulator (NJS) (AN/ULQ-24), and a Threat Radar Simulator (TRS). In addition, REWS provides limited response monitoring, and communications. Site Tombstone consists of a TRS similar to the one at REWS, a AN/ULQ-26 jammer, and an AN/SPS-73 surface search radar. EWR also provides Cryptologic Systems Simulator (CSS) emissions from SOARFAC and Portable Air Defense System (PADS/MADDS) from the Little Rock site. Additional site locations include mobile emitters which are deployed from SCI sites with LAN/WAN connections. C2W range capabilities are being enhanced with the addition of two Smart Target Threats (STT) to create a layered threat environment, with IR and visual cueing capability. Integrated remote control of all C2W systems on SCI is provided from the Range Operations Center (ROC) at the Naval Air Station, North Island in San Diego.

### **SHORE BOMBARDMENT AREA (SHOBA)**

The Shore Bombardment Area (SHOBA) supports AW, NSW, AMW, STW, EOD training, and RDT&E operations. SHOBA is the only PACFLT range which can support naval surface fire support, artillery/mortar and air-to-ground training in unison. Due to its location within the warning area W-291, realistic strike plans are possible because aircraft are not restricted to FAA altitude blocks and routes. SHOBA is also a certified laser range. A seismic technology based impact scoring system is installed around the heavy ordnance/bomb box. in Fire Support Area 2 (FSA-2). SHOBA has also been proposed as the range to support testing of Extended Range Guided Munition (ERGM).

### **SUW TRAINING**

SCORE utilizes two Laser Training Ranges (LTR-1/2) for the laser and Hellfire support. Segments of the water overlying SOAR (T3/4/5/MTR2) are used for gunnery and bombex training as well as the water adjacent to SHOBA.

### **MISSILEX TRAINING**

SCORE began supporting Surface-to-Air and Air-to-Air missile exercises in FY98 using existing Naval assets, particularly VC-6 for target preparation. SCORE utilizes the Multiple Aircraft GPS Integrated Command and Control (MAGICC) system for BQM-74E target support.

### SCORE Training Exercises History

The following SCORE Exercises Summary presents completed exercises for all the warfare training missions for Fiscal Years 1985-2006.

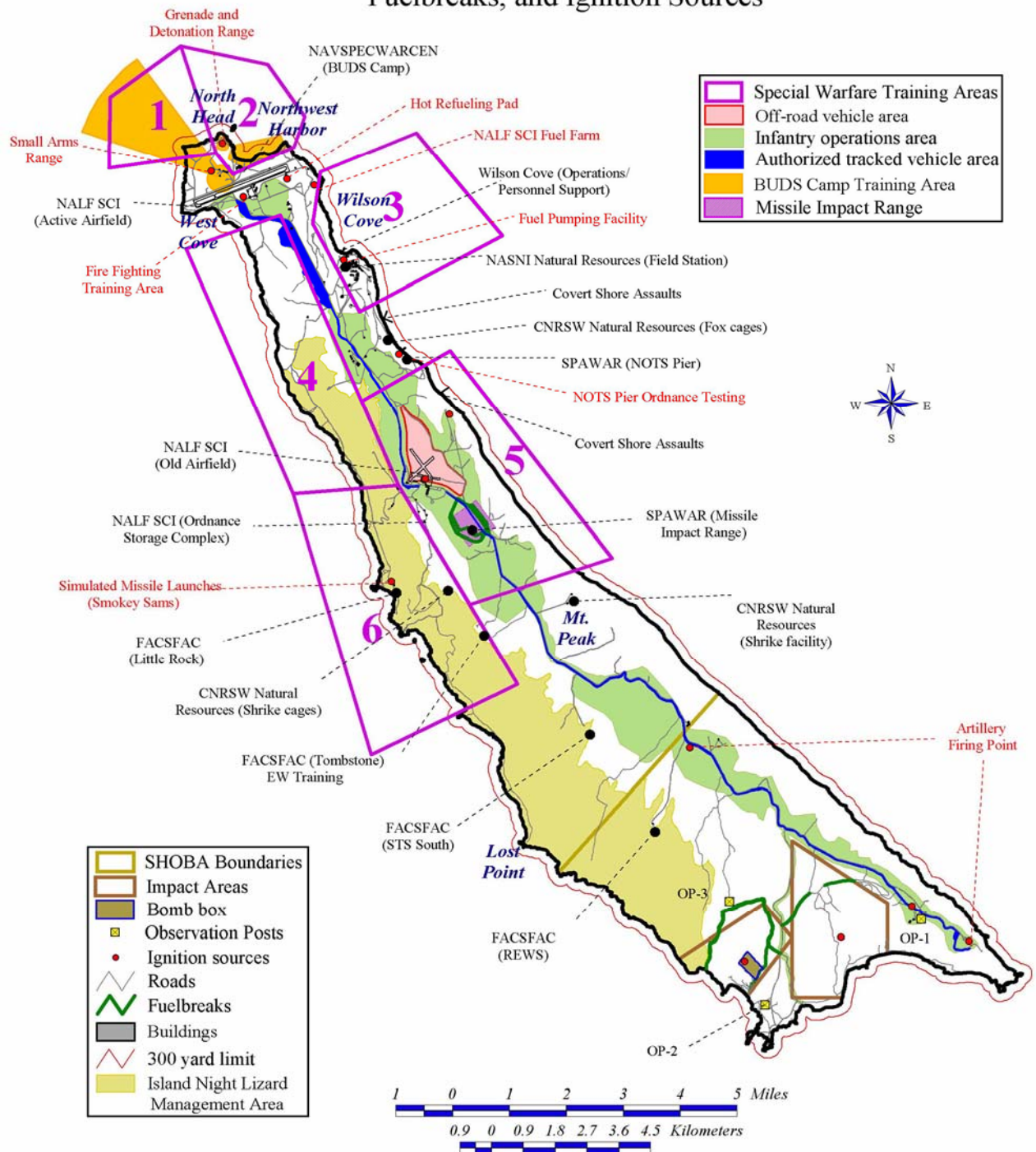
#### SCORE COMPLETED WARFARE TRAINING EXERCISES SUMMARY (1985-2006)

	<u>USW</u>	<u>C2W</u>	<u>MIW</u>	<u>SUW</u>	<u>NSW</u>	<u>AMW</u>	<u>AW</u>	<u>STW</u>	<u>RDT</u>	<u>GTD</u>
FY85	16									
FY86	143									
FY87	207									
FY88	309	108								
FY89	321	165								
FY90	367	188								
FY91	364	183								
FY92	406	185								
FY93	387	239								
FY94	377	361	48					1		
FY95	326	565	55					3		23
FY96	338	598	68	1				17		135
FY97	339	567	104	5	4	62		24		69
FY98	325	543	144	2	22	55	4	43		18
FY99	248	548	52	106	14	72	13	53		13
FY00	242	516	40	83	308	59	17	24		1
FY01	208	660	43	188	306	85	20	186		20
FY02	284	718	44	325	355	131	16	236		106
FY03	225	507	66	316	210	101	8	88		110
FY04	283	604	63	281	427	70	2	176	62	83
FY05	214	505	31	218	157	60	15	102	61	265
FY06	267	541	40	351	154	39	31	85	36	389

The following diagram provides a descriptive view of the operational areas on the island, as well as user locations (ie, SPECWAR, Natural Resources facilities, ordnance impact areas, etc).

# San Clemente Island

## Operational Boundaries, User Locations, Fuelbreaks, and Ignition Sources





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